

REMARKS

By the present Amendment, claims 28-30 are cancelled and claim 17 is amended. This leaves claims 17-27 pending in the application, with claim 17 being independent.

The amendment of claim 17 should be entered, despite being submitted after the final rejection, since it does not raise any new issues requiring further search or consideration. Only the recitations of former claims 28-30 are added to claim 17. Those recitations are treated in the final rejection and have the same citations applied against them as the subject matter of claim 17. Moreover, this amendment places the application in condition for allowance or in better form for appeal.

Thus, this amendment is appropriate for entry and consideration on its merits.

Claim Objection

Claim 20 is objected to as being informal. This claim recites a negative limitation permitted by M.P.E.P. § 2173.05(i), such that objection is improper.

This claim positively recites a characteristic of the adhesion closure elements being “producible without molding tools” as disclosed in the descriptive portion of the specification. This recitation does not exclude what the applicants did not disclose or invent, but does recite a characteristic of those elements that applicants disclosed and invented within the claimed combination. Thus, claim 20 is formal.

Rejection Under 35 U.S.C. § 103

As noted above, claim 17 now includes the limitations of prior claims 28-30, and covers a display device comprising a first flat substrate 3 having first and second opposite surfaces 4 and

8. Adhesion closure elements 5 are unitary and one piece with the first flat substrate and extend from the first surface to detachably secure the first flat substrate to a carrier 7. Triggerable pixels 2 of thin-film or thick-film technology are on the first flat substrate for displaying static and motion picture and/or alphanumeric characters. The triggerable pixels are triggerable by trigger electronics individually or in groups. A flat illuminant 11 of thin-film or thick-film technology emitting light as a result of being supplied with electrical energy is on the first flat substrate 3 and is located between the first flat substrate 6 and the triggerable pixels 2.

By forming the display device in this manner, the substrate of the closure device also forms the substrate for the display device. Nothing in the cited patent documents discloses or renders obvious the claimed triggerable pixels and flat illuminant of thin-film or thick-film technology on a substrate having adhesive disclosure elements unitarily formed as one piece with that substrate.

Claims 17-30 stand rejected under 35 U.S.C. § 103 as being unpatentable over DE 103 01 424 B3 to Tuma in view of U.S. Patent Publication No. 2002/0144442 to Harasawa. The German Tuma patent is cited for a device 5 having an electronic component 7 mounted on a flat substrate 3 with the flat substrate having a first surface with unitary adhesive closure elements 2 for detachably securing the device 5 to a carrier 9-11. The Harasawa publication is cited for disclosing a display device with a plurality of pixels triggerable by electronics. In support of the rejection, it is alleged that it would be obvious to use the Harasawa display device as the electronic component of the Tuma device. Regarding claim 18, the Tuma closure element 2 allegedly interacts mechanically with closure element 10 of a carrier 9-11. Relative to claim 19, the use of Van-der-Waals forces are alleged to be obvious. The limitation of claim 20 is viewed

as a product-by-process limitation, that allegedly does not produce a nonobvious structural difference. Relative to claim 21, the Tuma substrate 3 is allegedly thermoplastic. Relative to claim 22, the use of a duroplastic is alleged to be obvious. Relative to claim 23, making the substrate elastic is alleged to be obvious. Relative to claim 24, it is alleged that it would be obvious to provide the triggerable electronics on a second surface of the Tuma substrate 3 which second surface may be opposite the first surface with the closure elements. Relative to claim 25, the Harasawa pixels are allegedly formed by liquid crystals, electronic ink or electroluminescent components. Relative to claim 26, the use of polymer light emitting diodes is alleged to be obvious. Relative to claim 27, the addition to Harasawa pixels to the second substrate laminated to the first substrate is allegedly obvious. Relative to claim 28, the addition of the Harasawa display would allegedly be flat. Relative to claim 29, the thin or thick-film technology is allegedly provided by the combination of the two cited documents. Relative to claim 30, it is alleged that it would be obvious to provide the Harasawa illuminant 34 between the first Tuma substrate 3 and the added pixels of the Harasawa patent.

The German Tuma patent discloses a closure device having a circuit, e.g., comprising electrical strip conductors in thin-film or thick-film technology along with an electronic component such as a sensor. The electronic component is either mounted in a hybrid technique by a semiconductor device 7 as shown in Fig. 1 of the Tuma German patent or embedded in the substrate as shown for semiconducted device 107 in Fig. 2 of the German Tuma patent. The German Tuma patent does not disclose or render obvious combining a closure element with a display device, particularly as recited in amended claim 17.

The Harasawa patent discloses a flexible display panel 3 completely housed in a plastic housing 3a as a stand-alone device. A separately formed and attached electrical coupling part 3b and a separately formed and attached mechanical coupling part 3c are installed on the rear surface of housing 3a. The mechanical coupling part can be made of an attachable element such as Velcro. The Harasawa patent does not disclose, teach or otherwise render obvious combining the display device with adhesion closure elements as recited in claim 17, particularly by a display device of thin-film or thick-film technology triggerable pixels and flat illuminant on the substrate for the adhesion closure elements, with the flat illuminant being between the flat substrate and the pixels.

Harasawa panels 3 and 4 described in paragraph [0025] and panel 16 described in paragraph [0034] do not provide a flat illuminant as claimed. Those panels are formed of an organic electro-luminescence panel where the pixels are not back-illuminated as in claim 17 by the positioning of the flat illuminant. The Harasawa pixels emit light themselves as known from light emitting diodes. Thus, the Harasawa patent does not disclose the claimed substrate-illuminant-pixel structure of claim 17.

While the German Tuma patent discloses the use of thin-film and thick-film technology for producing conductive strips, it does not disclose or render obvious triggerable pixels and a flat illuminant for a display device which are of thin-film or thick-film technology on the same substrate from which the adhesion closure elements extend unitarily as a one-piece structure, with the flat illuminant being between the pixels and the flat substrate. The non-analogous flat sensor of the Tuma patent would not teach making the Harasawa panels flat, as alleged in the Office Action.

Accordingly, claim 17 is patentably distinguishable over the cited patent documents. None of the other cited patent documents cure these deficiencies in the German Tuma patent and the Harasawa publication.

Claims 18-27, being dependent upon claim 17, are also allowable for the above reasons. Moreover, these dependent claims recite additional features further distinguishing them over the cited patent documents.

Claim 18 is further distinguishable for the adhesive closure elements being mechanically interlockable in combination with the claimed triggerable pixels.

Claim 19 is further distinguishable by the adhesion elements being interactable with the carrier surface by Van der Waals forces, particularly in combination with the triggerable pixels. Nothing in the record establishes that the closure elements interacting mechanically would render obvious the closure elements of claim 19 which operate by Van der Waals forces. The mere conclusionary allegation of this claimed feature being obvious in the Office Action lacks any support in the record of this application.

Claim 20 is further distinguishable by the closure elements being producible without molding tools. This feature is not a “product-by-process limitation,” but is a structural limitation describing a characteristic of the closure elements. This limitation is not a method limitation. As stated In re Garnero, 162 U.S.B.Q. 221, 223 (C.C.P.A. 1969), similar terms such as “intermixed”, “ground in place”, “press fitted”, “etched” and “welded” are structural limitations and are to be given patentable weight in article claims. Claim 20 is such an article claim. Moreover, even if

treated as a product-process limitation, no showing is made that the claimed closure elements are the same as or as obvious over the German Tuma patent structure.

Claim 21 is further distinguishable by the flat substrate being thermoplastic in combination with the claimed triggerable pixels.

Claim 22 is further distinguishable by the substrate being of duroplastic in combination with the claimed triggerable pixels. No evidence in the record supports the allegation that the substrate of duroplastic is obvious. This lack of evidence renders the rejection untenable.

Claim 23 is further distinguishable by the substrate being elastic in combination with the claimed triggerable pixels. No evidence in the record supports the allegation that the substrate being elastic is obvious. This lack of evidence renders the rejection untenable.

Claim 24 is further distinguishable by the triggerable pixels being located directly on the second surface of the first flat substrate. Such pixels are not disclosed or rendered obvious by the Harasawa publication considered alone or in any obvious combination with the German Tuma patent. Particularly, the Harasawa panels are housed in housing 3a with the housing attached to coupling section 3c, likely by an adhesive. That Harasawa structure is directly contrary to the limitation of claim 24.

Claims 25 and 26 are further distinguishable by the specific triggerable pixels recited therein. Particularly, nothing in the record supports the allegation that polymer light emitting diodes are obvious. The lack of supporting evidence renders the rejection untenable.

Claim 27 is further distinguishable by the triggerable pixels being directly on a flat substrate laminated to the second surface of the first flat substrate. Nothing in the evidence in the record of this application supports the contention that such feature would be obvious. This lack of evidence renders the rejection untenable.

In view of the forgoing, claims 17-27 are allowable. Prompt and favorable action is solicited.

Respectfully submitted,



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